DOCUMENT RESUME

ED 403 781 FL 024 471

AUTHOR Han, Mei; And Others
TITLE A Profile of Policies and Practices for Limited English Proficient Students: Screening Methods, Program Support, and Teacher Training (SASS 1993-94). Statistical Analysis Report.
INSTITUTION American Institutes for Research, Washington, DC.; Catholic Univ. of America, Washington, D.C.
SPONS AGENCY National Center for Education Statistics (ED), Washington, DC.
REPORT NO ISBN-0-16-048976-8; NCES-97-472
PUB DATE Jan 97
NOTE 61p.
AVAILABLE FROM U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.
PUB TYPE Reports - Research/Technical (143) -- Statistical Data (110)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Bilingual Education; Educational Policy; Elementary Secondary Education; *English (Second Language); Enrollment Rate; *Identification; *Limited English Speaking; *National Surveys; Program Design; *Public Schools; Screening Tests; Second Language Programs; Teacher Education
IDENTIFIERS *Schools and Staffing Survey (NCES)

ABSTRACT

Results of the National Center for Education Statistics' 1993-94 Schools and Staffing Survey (SASS) concerning identification of and services to limited-English-proficient (LEP) students are reported in narrative and tabular forms. The survey is the largest and most comprehensive data set available about schools in the United States. Highlights of findings include these: over 2.1 million public school students are identified as LEP, and they account for five percent of all students and 31 percent of all American Indian/Alaska Native, Asian/Pacific Islander, and Hispanic students; LEP students are concentrated in the West, urban areas, and large schools; schools can use a variety of methods for identifying LEP students, most frequently using teacher observation, referral, home language survey, and previous student record; 76 percent of school with LEP enrollments provide English-as-a-Second-Language (ESL) programs and 36 percent have bilingual education programs, with about one-third of schools with LEP enrollments provide both ESL and bilingual education, and 71 percent of LEP students attend these schools; 3 percent of LEP students attend schools with neither program; 42 percent of all public school teachers have at least one LEP student; 30 percent of teachers instructing LEP students have training for it, but few have a related degree. (MSE)

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Statistical Analysis Report January 1997

A Profile of Policies and Practices for Limited English Proficient Students: Screening Methods, Program Support, and Teacher Training (SASS 1993–94)

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Statistical Analysis Report — January 1997

A Profile of Policies and Practices for Limited English Proficient Students: Screening Methods, Program Support, and Teacher Training (SASS 1993–94)

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U.S. Department of Education
Office of Educational Research and Improvement — NCES 97-472

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Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328
ISBN 0-16-048976-8

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January 1997

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Suggested Citation

U.S. Department of Education. National Center for Education Statistics. *A Profile of Policies and Practices for Limited English Proficient Students: Screening Methods, Program Support, and Teacher Training [SASS 1993–94],* NCES 97-472, by Mei Han, David Baker, and Carlos Roderiguez. Project Officer, Peggy Quinn. Washington, DC: 1997.

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Table of Contents

PAGE

List of Tables iv

List of Figures iv

Acknowledgments v

Highlights vii

Introduction 1

Data Source and Methodology 3

Results 5

- What is the distribution of LEP students across the nation's K–12 public schools? 5
- What screening methods do public schools use to identify LEP students? 9
- What proportion of public schools provide (1) English as a second language and/or (2) bilingual education programs? 11
- What proportion of LEP students receive special instruction in public schools? 13
- What percentage of public school instructors with LEP students in their classes have received training in LEP instruction? 16

Conclusion 19

References 21

Appendix A: Tables of Standard Errors 23

Appendix B: Denominators for Tables 1 and 2 33

Appendix C: Technical Notes 37

List of Tables

Table 1. Total number and percentage of public schools with LEP students and total number and percentage of students enrolled, by state: 1993–94 6

Table 2. Total number and percentage of public schools with LEP students and total number and percentage of students enrolled, by selected school characteristics: 1993–1994 8

Table 3. Percentage of public schools using each screening method to identify LEP students, by selected school characteristics: 1993–1994 10

Table 4. Percentage of public schools with LEP students providing ESL or bilingual education programs, by selected school characteristics: 1993–1994 12

Table 5. Percentage of LEP students receiving different kinds of instruction, by selected school characteristics: 1993–1994 15

Table 6. Number and percentage of teachers teaching LEP students, by selected school characteristics: 1993–94 17

Table 7. Percentage of teachers with LEP students who have received training for teaching LEP students, by selected school characteristics: 1993–94 18

List of Figures

Figure 1. Total number of LEP students, by region: 1993–1994 7

Figure 2. Percentage of public schools reporting LEP student enrollments, by urbanicity, school size, and percent minority enrollment: 1993–1994 9

Figure 3. Percentage of public schools using each instructional method to teach LEP students: 1993–94 14

Acknowledgments

The authors wish to thank all those who contributed to the production of this report. Among the American Institutes for Research staff, special mention goes to Don McLaughlin for advice and review, to Chuck Keil for programming assistance, to Shannon Daugherty and Susan Mansfield for editorial contribution, to Marianne Perie for her helpful comments, and to Mary Anne Arcilla and Grace Wu for administrative assistance.

We are very grateful for the comments and suggestions of reviewers at NCES: Dan Kasprzyk and Marilyn McMillen, Survey and Cooperative Systems Group; Edith McArther and Elvie Hausken, Data Development and Longitudinal Studies Group; Mike Cohen, Statistical Standards and Services Group; Sharon Bobbit, Office of Reform, Assistance, and Dissemination; and outside NCES: William Velez, University of Wisconsin; Jeff Rodamar, Office of Policy and Evaluation Services; Delia Pompa, Office of Bilingual Education and Minority Languages Affairs; Eileen Hanrahan, Program/Legal Team, Office for Civil Rights; and John Chapman and Tom Corwin, Budget Services, Office of the Under Secretary.

Highlights

- According to the 1993–94 Schools and Staffing Survey, over 2.1 million public school students in the United States are identified as limited English proficient (LEP) students. They account for 5 percent of all public school students and 31 percent of all American Indian/Alaska Native, Asian/Pacific Islander, and Hispanic students enrolled in public schools.

- LEP students are concentrated in the West, in urban areas, and in large schools with 750 or more students. Schools with 20 percent or more minority students and 20 percent or more students receiving "free or reduced-price lunches" are also more likely to enroll LEP students.

- Schools can use a combination of methods to identify LEP students. The most frequently reported methods are teacher observation or referral, home language survey or assessment, and previous student record.

- Seventy-six percent of public schools with LEP student enrollments provide English as a second language (ESL) programs, and 36 percent have bilingual education programs. Bilingual education programs are generally implemented in schools with higher concentrations of LEP students than in schools with smaller numbers of LEP students.

- About one-third of public schools with LEP student enrollments provide both ESL and bilingual education programs, and 71 percent of all LEP students attend these schools. Thirteen percent of schools (4,832) enrolling LEP students have neither ESL nor bilingual programs, and 3 percent of all LEP students (59,373) attend these schools.

- Forty-two percent of all public school teachers have at least one LEP student in their classes. Only 7 percent of these teachers have classes in which over 50 percent of their students are identified as LEP.

- Thirty percent of public school teachers instructing LEP students have received training for teaching LEP students, and fewer than 3 percent of teachers with LEP students have earned a degree in ESL or bilingual education.

Introduction

With over 90 percent of recent immigrants coming from non-English-speaking countries, the United States is becoming a more racially and ethnically diverse society than ever before (O'Hare 1992; Martin and Midgley 1994). Furthermore, over the last decade, the population of Asian/Pacific Islanders and Hispanics grew especially fast. Hispanics are the second largest minority group in the country, with a 1995 population total of 27 million. High levels of immigration, coupled with a large representation of young people and high fertility rates among minority groups, will continue the high growth rate of minority populations (O'Hare 1992). Many native born ethnic group members and new immigrants do not speak English at home.

The growth of the U.S. non-English-speaking population (including both native born and immigrants) is contributing to the increase in the linguistic diversity of public school students. According to a 1990 Census data report, 6.3 million school-aged children (5 to 17 years of age) spoke a language other than English at home, and almost 2.4 million of these children did not speak English "very well"; this represents a 28 percent increase from 1980 (U.S. Department of Commerce 1984, 1993). Similarly, a 1994 U.S. General Accounting Office (GAO) study reported that about one-half of the limited English proficient (LEP) students come from native born ethnic groups, while the other half are immigrants from many different cultural and linguistic backgrounds. Further, many of the LEP immigrant students come to the United States with little or no formal education (GAO 1994).

A large number of non-English-speaking students have low levels of academic performance in English; dropout rates for these students are also high (Baker and de Kanter 1983; Bradby, Owings, and Quinn 1992; Bennici and Strang 1995). On average, LEP students receive lower grades, score below their classmates on standardized reading and mathematics tests, and are often judged by their teachers as academic "underachievers" (Moss and Puma 1995). Children with limited English proficiency have unique educational needs. Providing a high-quality education to those students is an ongoing challenge for the American education system.

The law requires that LEP students be provided effective instruction that (1) leads to the timely acquisition of proficiency in the English language and (2) provides equal access to the mastery of the content knowledge and skills that are being taught to all students. The 1968 Bilingual Education Act, an amendment to the Elementary and Secondary Education Act (ESEA), signaled a commitment by the U.S. government to address the needs of students with limited English skills (Crawford 1989). In 1970, the former Department of Health, Education, and Welfare's Office for Civil Rights (OCR) issued a memorandum (informally known as the May 25th Memorandum) that explicitly discussed school districts' responsibilities to provide equal education opportunities for language minority students, consistent with the Title VI of the Civil Rights Act of 1964. In January 1974, the U.S. Supreme Court, in the case of *Lau* v.

Nichols, upheld the OCR's May 25th Memorandum as a valid interpretation of the requirements of the Title VI. Furthermore, OCR has continuously brought attention to bear upon meeting the needs of language minority students with its Strategic Plan (U.S. Department of Education 1994; Wilson, Shields, and Marder 1994).

Although Title VII of ESEA provides funds to school districts to help limited English proficient students that are supplemented with state and local funds, such funding has not kept pace with LEP student population increases (GAO 1994). For example, the $157 million Title VII appropriation in 1997 is 52 percent less than in 1980 when adjusted for inflation,[1] while the number of LEP students increased significantly during the same time period.

Currently, only limited nationally representative information is available on LEP students and the services they receive in U.S. schools. This report provides a descriptive analysis of issues related to teaching LEP students; as such, it focuses on the policies and practices of public schools toward LEP students, including screening methods, program support, and teacher training. The data used are from the Schools and Staffing Survey (SASS), where LEP students are defined as those "whose native or dominant language is other than English and who have sufficient difficulty speaking, reading, writing, or understanding the English language as to deny them the opportunity to learn successfully in an English-speaking-only classroom" (SASS Public School Questionnaire, 12).[2] Specifically, the report examines the following questions:

(1) What is the **distribution of LEP students** across different types of K–12 public schools (e.g., school level, size, community type, geographic location)?

(2) What **screening methods** do public schools use to identify LEP students?

(3) What proportion of public schools provide **(1) English as a second language** and/or **(2) bilingual education** programs? What proportion of LEP students receive **various kinds of instruction** in public schools?[3]

(4) What percentage of public school instructors with LEP students in their classes have received **training in LEP instruction**?

---

[1] The inflation factor (1.95252) used to convert 1997 dollars to 1980 dollars comes from an OMB documentation "Deflators for constant prices, fiscal year 1980."

[2] This definition emphasizes four factors: (1) LEP students' native or dominant language is a language other than English; (2) the extent of difficulty with English is "sufficient"; (3) LEP involves all aspects of language skills—listening, understanding, speaking, reading, and writing; and (4) whether unequal educational opportunities exist due to linguistic differences.

[3] The SASS Public School Questionnaire asked about four types of instruction aimed at: (1) teaching English to non-English-speaking students; (2) maintaining or improving a student's fluency in his or her home language; (3) teaching subject matter in the student's home language; and (4) providing special instruction for limited English proficient students whose educational attainment is below the level appropriate for children of their age.

Data Source and Methodology

Data in this report come from the third round of the nationally representative Schools and Staffing Survey (SASS), conducted during the 1993–1994 school year by the National Center for Education Statistics (NCES). SASS is the largest and most comprehensive dataset available about schools in the United States, as it has gathered a wide range of information on the characteristics, work, career plans, and attitudes of administrators and faculty, and on the characteristics of schools and districts across the country.

Designed to provide national- and state-level estimates for public schools, SASS used a random sample of schools and staff stratified by state, sector, and school level. It included separate questionnaires for public and private schools, school districts, school administrators, and teachers. This report draws upon information from the public school and public school teacher questionnaires.

The 1993–1994 SASS questioned school administrators about LEP students, and included: (1) how many LEP students were identified by the school; (2) what screening methods the school used to identify LEP students; (3) what types of programs were provided to address limited English proficiency; and (4) how many LEP students received different kinds of instruction. SASS also asked teachers whether any students in their classes were identified as LEP, and if the teachers had received training to teach LEP students.

Statistical estimates in this report are based on samples, and are, therefore, subject to sampling errors. Standard errors indicating the accuracy of the estimates are included in Appendix A. All comparisons of differences discussed in the report are tested for statistical significance at the $\alpha<.05$ level, adjusted for the number of simultaneous comparisons (within family comparisons). Standard errors are computed by using the method of balanced repeated replication, which takes into account the complex sample design of SASS.

Results

What is the distribution of LEP students across the nation's K–12 public schools?

Accurate estimation of students who need special language services and how those students are distributed among different regions of the country and different types of schools are crucial to the development of effective policies and program services. According to SASS, there are over 2.1 million K–12 LEP students in public schools in the United States (table 1). Consistent with the American ethnic group residential pattern, 82 percent of those students live in only five states: California, Texas, New York, Florida, and Illinois. More than 40 percent of LEP students are in California, accounting for almost 20 percent of all students in the state. About 10 percent of students in Arizona, New Mexico, and Texas are LEP students.

Forty-six percent of U.S. public schools report that they enroll at least one LEP student. LEP students account for 5 percent of all students and nearly one-third of all Asian/Pacific Islander, Hispanic, and American Indian/Alaska Native students in public schools.

LEP students tend to be concentrated in specific parts of the country and attend specific types of schools. Figure 1 illustrates the number of LEP students by geographic region. Half of all LEP students (over one million) live in the West; about a half-million LEP students are in the South, while the Midwest has the smallest number of LEP students. More than two-thirds of Western schools have LEP students enrolled, compared to only one-quarter of Midwestern schools (table 2). LEP students account for 12 percent of all students in the West, but fewer than 2 percent of students in the Midwest.

Sixty percent of public schools in urban and suburban areas have LEP students, compared to 31 percent in rural areas (table 2 and figure 2). Close to 1 out of every 10 urban students and 1 out of every 20 suburban students (but only 1 out of every 50 rural students) are LEP students.

Larger schools are more likely to enroll LEP students. For example, two-thirds of the nation's schools with 750 or more students enrolled (i.e., the largest schools) have LEP students, compared to only 16 percent of the schools with fewer than 150 students enrolled (i.e., the smallest schools). LEP students also account for a higher proportion of all students in larger schools. For example, 2 percent of all students in the smallest schools are LEP, compared to 7 percent in the largest schools.

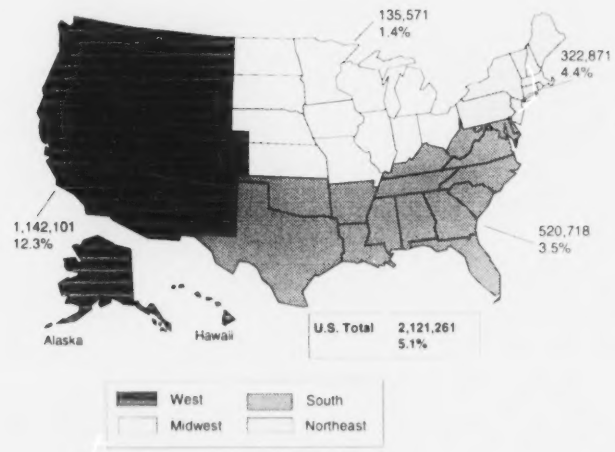
Table 1— Total number and percentage of public schools with LEP students and total number and percentage of LEP students enrolled, by state: 1993–94

	Schools with LEP Students		LEP Students		
State	Number	Percent	Number	As a % of all students	As a % of American Indian, Asian, and Hispanic students
Total	37,419	46.3%	2,121,261	5.1%	31.1%
Alabama	185	14.5	843	0.1	6.6
Alaska	233	48.7	9,879	7.8	26.1
Arizona	925	87.5	70,959	10.4	28.8
Arkansas	308	28.4	1,377	0.3	16.5
California	6,610	90.3	922,239	19.2	41.0
Colorado	747	56.2	17,344	2.8	13.4
Connecticut	506	52.5	14,409	3.0	28.3
Delaware	106	62.5	1,164	1.1	19.0
District of Columbia	75	47.1	4,447	5.9	85.9
Florida	1,562	66.5	111,821	5.9	40.0
Georgia	593	34.4	10,223	0.9	27.8
Hawaii	226	96.3	11,636	6.7	8.9
Idaho	363	63.5	4,724	2.2	24.0
Illinois	1,281	33.0	54,292	3.1	25.9
Indiana	515	27.5	4,127	0.4	17.4
Iowa	250	16.5	4,374	0.9	24.6
Kansas	229	15.8	4,718	1.1	13.7
Kentucky	#	#	#	#	#
Louisiana	313	21.6	5,450	0.7	22.7
Maine	175	24.2	804	0.4	24.5
Maryland	589	49.7	8,965	1.2	20.1
Massachusetts	961	56.9	33,364	4.3	35.5
Michigan	1,375	43.5	19,359	1.3	28.0
Minnesota	483	32.4	17,277	2.5	34.3
Mississippi	143	14.9	3,372	0.6	47.8
Missouri	396	19.0	4,605	0.5	17.0
Montana	136	15.3	5,116	2.9	22.1
Nebraska	#	#	#	#	#
Nevada	260	71.2	13,448	5.8	29.3
New Hampshire	108	24.2	468	0.3	11.9
New Jersey	1,381	62.9	50,101	4.6	25.9
New Mexico	511	77.1	30,296	9.4	16.3
New York	2,697	69.1	200,253	7.7	32.9
North Carolina	927	48.1	13,768	1.3	36.8
North Dakota	98	16.8	2,159	1.9	23.5
Ohio	886	24.4	12,829	0.7	30.2
Oklahoma	680	38.6	16,455	2.8	16.3
Oregon	655	55.3	12,606	2.6	23.8
Pennsylvania	1,064	34.0	16,049	0.9	22.7
Rhode Island	171	58.0	7,017	5.6	43.4
South Carolina	354	32.7	1,669	0.3	13.2
South Dakota	#	#	#	#	#
Tennessee	299	19.6	2,800	0.3	28.9
Texas	4,568	77.6	325,215	9.7	26.1
Utah	413	61.2	5,856	1.3	15.6
Vermont	#	#	#	#	#
Virginia	774	45.6	11,376	1.2	20.3
Washington	1,122	62.1	37,416	4.1	25.5
West Virginia	#	#	#	#	#
Wisconsin	548	27.2	9,290	1.1	16.3
Wyoming	74	17.9	583	0.6	6.2

(#) Too few sample cases for reliable estimates

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–94 (Public School Questionnaire).

Figure 1— Total number of LEP students, by region: 1993–1994



SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–94 (Public School Questionnaire).

Sixty-two percent of all public schools with 20 percent or more minority student enrollment (i.e., high-minority schools) have LEP students, compared to 34 percent of schools with less than 20 percent minority student enrollment (i.e., low-minority schools). LEP students make up 9 percent of the total enrollment of high-minority schools, compared to 1 percent of low-minority schools. Furthermore, four times as many LEP students attend schools with 20 percent or more students receiving "free or reduced-price lunches" (i.e., schools serving more economically disadvantaged students), compared to schools with fewer than 20 percent of students receiving "free or reduced-price lunches" (i.e., schools serving fewer economically disadvantaged students).

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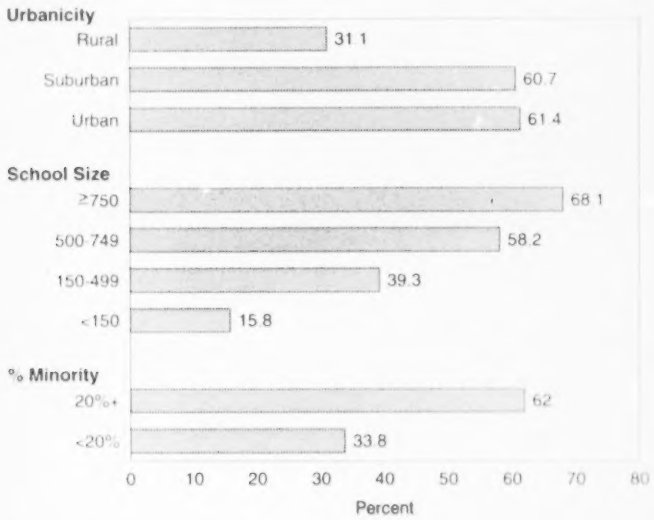
Table 2— Total number and percentage of public schools with LEP students and total number and percentage of LEP students enrolled, by selected school characteristics: 1993–1994

	Schools with LEP Students		LEP Students		
State	Number	Percent	Number	As a % of all students	As a % of American Indian, Asian, and Hispanic students
Total	37,419	46.3%	2,121,261	5.1%	31.1%
Region					
Northeast	7,126	52.2	322,871	4.4	31.0
Midwest	6,285	26.6	135,571	1.4	23.8
South	11,733	44.4	520,718	3.5	27.5
West	12,275	72.3	1,142,101	12.3	34.5
Community type					
Urban	11,771	61.4	1,143,229	9.4	35.9
Suburban	13,304	60.7	647,132	4.8	29.6
Rural	12,344	31.1	330,900	2.1	22.9
School type					
Elementary	28,373	48.9	1,617,595	6.0	35.5
Secondary	8,092	41.2	480,778	3.5	22.4
Combined	954	31.0	22,889	2.3	20.7
Student enrollment					
<150	1491	15.8	16,407	2.1	20.4
150–499	14,583	39.3	392,691	3.2	27.3
500–749	11,483	58.2	567,648	4.7	31.4
≥750	9,862	68.1	1,144,516	7.0	32.8
Minority enrollment					
<20%	15,154	33.8	160,359	0.8	20.0
≥20%	22,265	62.0	1,960,901	9.2	32.6
% of students receiving free or reduced-price lunch					
<20%	12,404	47.3	270,562	1.7	18.1
≥20%	23,462	46.5	1,792,091	7.4	35.2

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–1994 (Public School Questionnaire).

Figure 2— Percentage of schools reporting LEP student enrollments, by urbanicity, school size, and percent minority enrollment: 1993–1994



SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–94 (Public School Questionnaire).

What screening methods do public schools use to identify LEP students?

Schools use various language proficiency screening methods to determine whether students should be provided with special instructional services. On the SASS public school questionnaire, school respondents could choose up to seven of the following methods to describe how their schools identify LEP students:[4] (1) recommendation by parent; (2) teacher observation or referral; (3) home language survey or assessment; (4) written language exam; (5) oral interview in native language; (6) previous student record; and (7) achievement test results.

It is likely that most schools use a combination of methods to identify LEP students. The SASS school questionnaire data, however, do not allow us to estimate which combination is most commonly used. The highest proportions reported are (a) teacher observation or referral; (b) home language survey or assessment; and (c) previous student record (table 3). About two-thirds of the schools report that they use at least one of these three screening methods. Half of the schools use recommendations by parents, while approximately one-third employ achievement test results in screening for limited English proficiency.

[4] These seven methods may not include all the approaches public schools use to identify LEP students, nor are they necessarily mutually exclusive of one another's use in a school.

Table 3— Percentage of public schools using each screening method to identify LEP students, by selected school characteristics: 1993–1994

School characteristics	Parent recommendation	Teacher referral	Home language survey	Language exam	Oral interview	Student record	Achievement test
Total	50.6%	71.9%	67.6%	41.9%	43.8%	64.3%	30.8%
Region							
Northeast	51.9	76.6	56.8	46.2	38.0	64.9	27.4
Midwest	57.6	82.9	47.7	27.5	30.2	64.0	24.2
South	48.0	66.9	69.9	36.9	42.0	64.2	34.5
West	48.8	68.3	81.8	51.5	55.7	64.1	32.7
Community type							
Urban	42.8	62.0	75.1	45.5	49.7	63.3	31.0
Suburban	53.8	75.3	67.2	41.0	41.3	63.3	28.7
Rural	54.5	77.6	60.8	39.3	40.7	66.1	33.0
School type							
Elementary	51.2	72.0	69.5	40.9	43.3	62.2	28.9
Secondary	48.6	71.5	61.1	46.4	45.9	71.4	36.3
Combined	50.8	72.9	66.4	32.8	39.5	65.5	41.4
Student enrollment							
<150	34.7	68.6	61.3	36.0	35.0	55.0	37.4
150–499	52.2	75.5	64.9	38.1	41.3	62.4	29.6
500–749	52.8	72.2	69.9	42.5	44.7	65.5	26.3
≥750	48.1	66.8	69.7	47.7	47.6	67.1	37.0
Minority enrollment							
<20%	60.1	81.9	51.9	33.7	33.5	63.0	24.1
≥20%	44.1	65.1	78.2	47.4	50.7	65.1	35.4
% of students receiving free or reduced-price lunch							
<20%	59.7	80.8	57.4	37.6	36.9	64.5	29.9
≥20%	45.3	66.8	73.1	43.4	47.7	64.0	31.8

NOTE: Schools can choose as many methods as were used. Methods sum to more than 100 percent due to schools identifying all methods used.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–1994 (Public School Questionnaire).

The methods used to identify LEP students vary somewhat by region and school type. For example, urban schools are less likely to rely on parent recommendations than suburban and rural schools (43 versus 54 and 55 percent, respectively). At the same time, schools with 150 or more students enrolled are more likely to use parent recommendations than schools with fewer than 150 students enrolled (52, 53, and 48 percent versus 35 percent, respectively). Low-minority schools and schools serving fewer economically disadvantaged students also tend to rely on parent recommendations.

Schools in the Northeast and Midwest are more likely to use teacher referrals to screen LEP students than schools in the South and West. Similarly, suburban and rural area schools, low-minority schools, and schools serving fewer economically disadvantaged students also tend to use teacher referral to identify LEP students, compared to urban schools, high-minority schools, and schools serving more economically disadvantaged students. The use of a home language survey or assessment as a means to identify LEP students is most common in schools in the West and in urban areas.

What proportion of public schools provide (1) English as a second language and/or (2) bilingual education programs?

School districts are required by national and state laws to provide English as a second language (ESL) or bilingual language programs for LEP students who need such services to be able to participate effectively in the regular instructional program. However, districts have the flexibility to decide on the educational approach that best meets the needs of their LEP students. SASS asked whether schools provide one or both of these two programs to LEP students: (1) English as a second language (ESL), and (2) bilingual education. In SASS, ESL programs refer to when "students with limited English proficiency are provided with intensive instruction in English"; bilingual education programs refer to when the "native language is used to varying degrees in instructing students with limited English proficiency, for example, transitional bilingual education and structured immersion" (SASS Public School Questionnaire, 15).

Generally, public schools enrolling LEP students are more likely to offer ESL than bilingual programs: 85 percent of schools provide ESL programs, while 36 percent offer bilingual programs (table 4). More than three-fourths of all schools, except schools with fewer than 150 students enrolled, provide ESL programs. The widespread availability of ESL programs may occur because schools can more readily provide ESL services than bilingual services, especially when LEP students come from several different language groups. Effectively offering bilingual instruction requires sufficient numbers of teachers who are bilingual and adequately trained or certified to teach subject matter in languages other than English, and normally it is provided when LEP students come from the same language group.

Among schools serving LEP students, the percentage offering bilingual programs is highest (45 to 50 percent) in the West, in urban areas, in low-minority schools, and in schools with fewer economically disadvantaged students. For example, one-quarter of schools in the Northeast, compared to half of the schools in the West, have bilingual programs. More than twice as many high-minority schools offer bilingual programs as low-minority schools.

However, it should be noted that ESL and bilingual education approaches are not mutually exclusive and often may be combined in the same school or school district. About one-third of schools with LEP student enrollments provide both ESL and bilingual education programs, and 71 percent of LEP students attend these schools. Thirteen percent of schools (4,832) enrolling LEP students have neither ESL nor bilingual programs, yet 3 percent of LEP students (59,373) attend these schools (table not shown). For schools offering both ESL and bilingual programs, SASS Public School Questionnaire data do not permit estimation of the number of LEP students in both programs or the number of students not participating in any program in these schools.

Table 4— Percentage of public schools with LEP students providing ESL or bilingual education programs, by selected school characteristics: 1993–1994

School characteristics	ESL programs	Bilingual programs
Total	85.2%	35.5%
Region		
Northeast	89.7	25.5
Midwest	78.8	29.3
South	82.0	29.4
West	88.9	50.3
Community type		
Urban	84.5	45.1
Suburban	88.4	25.7
Rural	82.4	37.0
School type		
Elementary	85.7	36.1
Secondary	84.4	32.8
Combined	75.9	43.0
Student enrollment		
<150	62.2	35.2
150–499	83.8	34.2
500–749	87.4	33.9
≥750	88.2	39.4
Minority enrollment		
<20%	82.3	19.5
≥20%	87.1	46.5
% of students receiving free or reduced-price lunch		
<20%	86.6	18.1
≥20%	84.1	45.3

NOTE: Schools can provide both ESL and bilingual programs; therefore, the proportions sum to more than 100 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–1994 (Public School Questionnaire).

What proportion of LEP students receive special instruction in public schools?

SASS asked public school officials to report on four different kinds of instruction LEP students received:[5]

> (1) instruction aimed at teaching English to non-English-speaking students (such as English as a Second Language or English for speakers of other languages); (2) instruction aimed at maintaining or improving the student's fluency in his or her home language (such as Spanish language lessons for Spanish speakers); (3) instruction aimed at teaching subject matter in the student's home language (such as teaching math in Spanish); and (4) instruction for limited English proficient students whose educational attainment is below the level appropriate for children of their age (such as Compensatory Education).[6] (SASS Public School Questionnaire, 13)

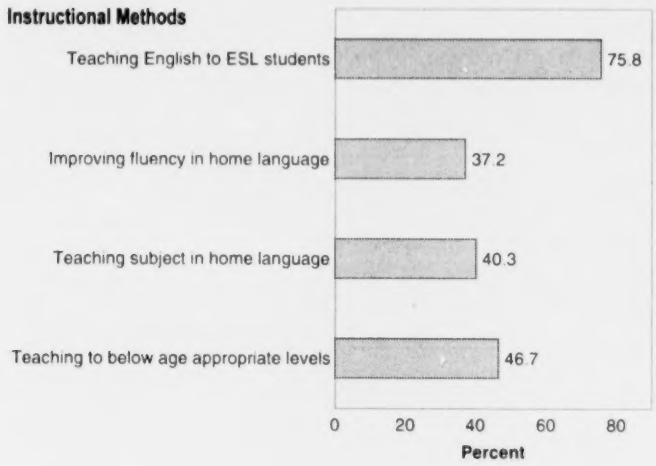
Students may receive all four types of instruction, any combination of the four, or none of these; however, the data do not permit estimation of what proportion of students receive a combination of services.

Teaching English to non-English-speaking students can be provided to any LEP student, whereas bilingual instruction is likely to be provided only with available bilingual teachers and a concentration of students speaking the same language. Three-quarters of LEP students receive ESL instruction, compared with one-third to about one-half of these students who receive other services aimed at (1) improving fluency in their home language, (2) teaching subject matter in their home language, and/or (3) teaching below age appropriate levels (figure 3 and table 5). Students in high-minority schools and in schools serving more economically disadvantaged students are more likely to receive some kind of bilingual services than students in low-minority schools and in schools serving fewer economically disadvantaged students. Also, students in urban schools are more likely to receive subject matter instruction in their home language than students in suburban and rural schools.

[5] These services are illustrative and do not include all possible instructional approaches.

[6] Bilingual education is not compensatory education. However, some LEP students may also be eligible for compensatory education services.

Figure 3— Percentage of public schools using each instructional method to teach LEP students: 1993–94



SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–94 (Public School Questionnaire).

Table 5— Percentage of LEP students receiving different kinds of instruction, by selected school characteristics: 1993–1994

School characteristics	Teaching English to non-English-speaking students	Improving fluency in .home language	Teaching subject in home language	Teaching to below age appropriate levels
Total	75.8%	37.2%	40.3%	46.7%
Region				
Northeast	87.4	45.0	47.2	34.2
Midwest	77.2	25.0	35.4	38.8
South	64.5	27.9	32.7	37.2
West	77.5	40.7	42.4	55.4
Community type				
Urban	75.1	43.8	48.8	48.3
Suburban	80.5	27.5	27.9	40.5
Rural	69.4	33.3	35.4	53.3
School type				
Elementary	77.2	41.7	45.1	51.3
Secondary	71.6	21.9	24.7	31.0
Combined	68.6	38.0	24.8	48.4
Student enrollment				
<150	51.8	42.9	29.6	58.7
150–499	70.1	32.1	39.4	50.0
500–749	76.1	38.6	43.9	50.0
≥750	78.0	38.1	39.0	43.7
Minority enrollment				
<20%	74.6	15.3	18.2	33.8
≥20%	75.9	39.0	42.1	47.7
% of students receiving free or reduced-price lunch				
<20%	75.9	15.8	16.4	26.8
≥20%	75.6	41.0	44.8	50.5

NOTE: See text on page 14 for the exact wording of each instruction for columns 1–4. Students may receive more than one type of instruction; therefore, the proportions sum to more than 100 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–1994 (Public School Questionnaire).

What percentage of public school instructors with LEP students in their classes have received training in LEP instruction?

Table 6 shows that 42 percent of public school teachers in the United States (or just over 1 million teachers) report that there are students in their classes identified as having limited English skills in 1993–94. Seventy-four percent of these teachers report that fewer than 10 percent of their students are LEP, 18 percent report that 10 to 50 percent of their students are LEP, and 7 percent of teachers report that more than half of their students are LEP. The distribution of LEP students throughout the nation is related to which teachers have some LEP students in their classes. At least 50 percent of teachers in the West, in urban areas, in high-minority schools, and in large schools have LEP students in their classes. In addition, the highest percentages of classes with over 50 percent LEP students are in schools in the West, in urban areas, and in schools with 20 percent or more minority student enrollments and with 20 percent or more students receiving free or reduced-price lunches.

There is almost universal agreement that teacher training and preparation in the subject area in which he or she is assigned to teach are among the most important characteristics of a qualified teacher (e.g., Ingersoll 1995). For teachers of LEP students, the information about such training would include (1) whether teachers teaching LEP students have an academic degree (bachelor's, master's, or Ph.D.) in teaching English as a second language or in bilingual education, and (2) whether teachers have received training for teaching LEP students. Information on these aspects of teacher training is important for the simple reason that the availability of qualified ESL or bilingual teachers may affect decisions about what approaches school systems reasonably can be expected to adopt for the education of LEP students.

The 1993–94 SASS data reveal that only 2.5 percent of teachers who instruct LEP students actually have an academic degree in ESL or bilingual education (table 7). Furthermore, only 30 percent of the teachers with LEP students in their classes have received any training in teaching LEP students. More public schools report that they had vacancies in ESL or bilingual education positions in 1993–94 than in 1990–91: 25 versus 7 percent. Among these schools, 26 percent in 1993–94, compared to 37 percent in 1990–91, find it very difficult or impossible to fill the vacancy (Choy et al. 1993; Henke et al. 1996).

Teachers in schools with higher concentrations of LEP students are more likely than other teachers to have received training in teaching LEP students. For example, 87 percent of teachers with classes made up of more than 50 percent LEP students have received such training, compared to 19 percent of teachers with fewer than 10 percent LEP students. Close to half of the teachers with LEP students in the West, where half of all LEP students reside, have received training in teaching LEP students, compared to 12 percent of teachers with LEP students in the Midwest region, where only 6 percent of LEP students reside. Also, more teachers instructing LEP students in urban schools, in schools with 20 percent or more minority enrollments, and in schools with 20 percent or more students receiving free or reduced-price lunches have received training in teaching LEP students, compared to teachers in rural schools, in schools with less than 20 percent minority enrollments, and in schools with fewer than 20 percent of students receiving free or reduced-price lunches.

Table 6— Number and percentage of teachers teaching LEP students, by selected school characteristics: 1993–94

School characteristics	Number of teachers teaching LEP students	Percent of all teachers teaching LEP students	Among teachers with LEP students enrolled: *Percent of teachers with <10% LEP students*	*Percent of teachers with 10–50% LEP students*	*Percent of teachers with ≥ 50% LEP students*
Total	1,067,774	41.7%	74.4%	18.2%	7.4%
Region					
Northeast	228,644	44.4	76.4	16.4	7.2
Midwest	188,775	29.5	88.5	9.0	2.5
South	351,269	37.2	78.4	15.1	6.5
West	299,086	65.0	59.1	29.3	11.6
Community type					
Urban	320,442	50.9	64.6	23.5	11.9
Suburban	382,535	48.3	78.1	16.4	5.5
Rural	700,217	29.2	84.0	12.2	3.8
School type					
Elementary	603,751	40.3	72.4	18.5	9.1
Secondary	351,050	43.2	80.4	15.7	3.9
Combined	23,694	34.7	70.1	22.8	7.1
Student enrollment					
<150	18,179	22.3	79.9	14.0	6.1
150–499	268,764	34.2	77.8	16.1	6.1
500–749	270,499	40.7	76.8	15.6	7.6
≥750	421,053	49.6	72.5	19.9	7.6
Minority enrollment					
<20%	376,945	30.3	93.1	5.2	1.7
≥20%	601,549	52.9	64.1	25.3	10.6
% of students receiving free or reduced-price lunch					
<20%	354,705	39.0	86.8	10.4	2.8
≥20%	576,303	42.2	67.5	22.3	10.2

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–1994 (Public Teacher Questionnaire).

Table 7— Percentage of teachers with LEP students who have received training for teaching LEP students, by selected school characteristics: 1993–94

School characteristics	Have earned an academic degree in ESL or bilingual education	Have received training for teaching LEP students
Total	2.5%	29.5%
Region		
Northeast	3.3	21.5
Midwest	1.0	11.6
South	2.4	29.0
West	3.1	47.3
Community type		
Urban	4.4	37.5
Suburban	2.1	28.3
Rural	1.1	20.6
School type		
Elementary	3.1	33.0
Secondary	1.7	22.4
Combined	0.8	30.2
Student enrollment		
<150	2.9	23.3
150–499	2.5	25.0
500–749	2.9	29.8
≥750	2.4	31.7
Minority enrollment		
<20%	0.6	15.0
≥20%	3.8	38.0
% of students receiving free or reduced-price lunch		
<20%	1.4	20.0
≥20%	3.3	35.1
% LEP students in class		
<10%	0.7	19.2
10–50%	2.9	48.3
≥50%	19.7	86.7

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–1994 (Public Teacher Questionnaire).

Conclusion

Over 2.1 million students in public schools are identified as LEP, accounting for 5 percent of the K–12 public school students in the United States. Half of all LEP students live in the West, and more than 80 percent are concentrated in just five states: California, Texas, New York, Florida, and Illinois. Additionally, LEP students are widely dispersed among public schools. Close to half of the U.S. public schools report LEP enrollment. Schools that enroll LEP students vary significantly by geographic region, school size, and minority enrollment. For example, more than twice as many schools in the West as in the Midwest enroll LEP students. Larger schools and schools with 20 percent or more minority enrollments also have more LEP students. Over half of all LEP students attend urban schools and large schools with more than 750 students enrolled.

Most schools use a combination of methods to identify LEP students. The highest proportions reported are teacher observation or referral, home language survey or assessment, and previous student record. About half of the nation's public schools use parent recommendations. Achievement test results are the screening device used least often.

Schools may provide both ESL and bilingual programs to LEP students, and students may receive more than one type of special instruction. Greater percentages of public schools use ESL programs to improve the English proficiency of LEP students. The ability of a school to offer bilingual education may be determined by a number of factors, such as whether there is a concentration of the same language background students in the same class and whether qualified bilingual teachers are available. Schools with a high concentration of LEP students are more likely to provide bilingual education.

Forty-two percent of public school teachers have LEP students in their classes, and 74 percent of these teachers report that fewer than 10 percent of their students are LEP. Three out of 10 teachers instructing LEP students have received training in teaching LEP students, but fewer than 3 percent of these teachers have received an academic degree in ESL or bilingual education. However, teachers with high percentages of LEP students in their classes are much more likely to have received training in teaching LEP students than are teachers in classes with few LEP students.

The results suggest two contrasting patterns of LEP concentration and school services. A significant proportion of LEP students are going to school with other LEP students, and the schools they attend are likely to provide teachers with specific skills to teach them. At the same time, many LEP students attend schools having few other LEP students. These students are more likely to be enrolled in schools that do not have teachers with specialized training in LEP education.

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Appendix A
Tables of Standard Errors

Table A.1— Standard errors for total number and percentage of public schools with LEP students and total number and percentage of LEP students enrolled, by state: 1993–94

	Schools with LEP Students		LEP Students		
State	Number	Percent	Number	As a % of all students	As a % of American Indian, Asian, and Hispanic students
Total	479.64	.57	105669.76	.23	.98
Alabama	30.44	2.43	135.04	.02	1.14
Alaska	15.82	3.20	1410.31	1.04	2.84
Arizona	33.82	3.25	7175.99	.99	1.83
Arkansas	31.29	2.85	296.78	.06	3.66
California	124.06	1.43	83899.56	1.61	2.60
Colorado	49.55	3.76	2054.56	.36	1.44
Connecticut	35.90	3.86	3233.21	.69	6.76
Delaware	8.11	4.72	216.62	.21	3.05
District of Columbia	6.12	3.69	882.99	1.15	17.07
Florida	66.87	2.80	14444.32	.74	3.63
Georgia	54.24	3.11	2376.25	.20	4.13
Hawaii	5.06	2.16	1325.97	.64	.80
Idaho	21.58	3.69	758.36	.30	2.77
Illinois	72.92	2.01	9125.72	.51	2.60
Indiana	57.75	3.09	973.79	.10	3.56
Iowa	49.46	3.29	1404.39	.29	6.01
Kansas	38.61	2.65	951.73	.21	1.97
Kentucky	#	#	#	#	#
Louisiana	26.21	1.83	1096.25	.14	3.48
Maine	22.01	3.01	117.14	.05	3.09
Maryland	31.33	2.62	1080.10	.14	1.41
Massachusetts	64.64	3.96	3517.63	.45	2.16
Michigan	143.05	4.62	6426.79	.42	9.19
Minnesota	53.99	3.62	4113.92	.57	6.06
Mississippi	17.95	1.84	1585.60	.29	24.87
Missouri	63.46	3.05	2346.72	.25	9.37
Montana	17.95	2.00	1331.28	.76	5.24
Nebraska	#	#	#	#	#
Nevada	12.51	3.14	1672.55	.69	2.30
New Hampshire	17.62	3.96	107.08	.06	3.69
New Jersey	112.29	5.02	10899.70	.84	3.92
New Mexico	26.34	3.94	4457.92	1.20	1.88
New York	151.64	3.81	23185.31	.76	3.48
North Carolina	69.50	3.36	3798.83	.36	10.38
North Dakota	15.68	2.75	424.15	.39	4.66
Ohio	123.02	3.33	5728.03	.31	10.54
Oklahoma	55.59	3.19	1940.67	.35	1.75
Oregon	56.73	4.76	1754.88	.35	3.24
Pennsylvania	140.15	4.47	5284.65	.29	5.75
Rhode Island	13.48	4.47	1216.57	.97	5.25
South Carolina	50.24	4.56	543.86	.08	4.12
South Dakota	#	#	#	#	#
Tennessee	60.12	3.95	849.91	.10	8.34
Texas	181.45	3.03	41645.43	1.11	2.21
Utah	19.16	2.69	786.68	.16	1.81
Vermont	#	#	#	#	#
Virginia	84.42	4.88	2510.98	.26	3.19
Washington	64.33	3.56	6004.01	.66	2.91
West Virginia		2.44		.04	5.67
Wisconsin	68.09	3.34	1806.91	.21	3.15
Wyoming	9.79	2.30	344.97	.32	3.13

(#) Too few sample cases for reliable estimates

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–94 (Public School Questionnaire).

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Table A.2— Standard errors for total number and percentage of public schools with LEP students and total number and percentage of LEP students enrolled, by selected school characteristics: 1993–1994

	Schools with LEP Students		LEP Students		
State	Number	Percent	Number	As a % of all students	As a % of American Indian, Asian, and Hispanic students
Total	479.64	.57	105669.76	.23	.98
Region					
Northeast	227.97	1.61	26081.84	.32	2.20
Midwest	244.89	1.02	12463.07	.12	1.64
South	265.17	1.00	45389.81	.28	1.58
West	174.48	1.00	82457.10	.82	1.79
Community type					
Urban	247.56	.99	81336.84	.56	1.45
Suburban	355.66	1.02	72139.46	.47	2.30
Rural	369.71	.88	34183.48	.20	1.50
School type					
Elementary	458.61	.73	100151.92	.34	1.41
Secondary	171.05	.73	25506.13	.17	.83
Combined	125.79	3.06	2454.58	.23	1.91
Student enrollment					
<150	118.33	1.32	1470.03	.17	1.75
150–499	450.08	.92	39033.20	.30	1.91
500–749	405.21	1.26	55042.36	.45	2.27
≥750	436.32	1.38	89175.12	.45	1.40
Minority enrollment					
<20%	466.65	.86	11871.49	.06	1.43
≥20%	434.60	1.01	105005.33	.43	1.07
% of students receiving free or reduced-price lunch					
<20%	357.94	.89	16174.70	.09	.95
≥20%	472.66	.80	104903.40	.38	1.18

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–1994 (Public School Questionnaire).

Table A.3— Standard errors for percentage of public schools using each screening method to identify LEP students, by selected school characteristics: 1993–1994

School characteristics	Parent recommendation	Teacher referral	Home language survey	Language exam	Oral interview	Student record	Achievement test
Total	1.14	.97	.72	1.36	1.30	1.20	1.25
Region							
Northeast	3.32	2.09	1.99	3.02	2.39	2.71	2.68
Midwest	2.25	1.87	2.20	2.22	2.22	2.38	1.94
South	1.88	1.69	1.33	2.08	1.88	1.82	1.99
West	2.07	1.76	1.02	2.08	2.29	2.30	1.98
Community type							
Urban	1.54	1.52	1.28	2.13	2.57	1.94	1.91
Suburban	1.82	1.84	1.48	1.83	1.98	2.09	1.94
Rural	1.91	1.89	1.60	2.21	1.80	1.96	1.70
School type							
Elementary	1.47	1.24	1.07	1.65	1.65	1.56	1.69
Secondary	1.36	1.33	1.11	1.28	1.10	1.28	1.51
Combined	5.57	3.29	4.76	4.16	5.19	4.62	7.22
Student enrollment							
<150	4.38	5.37	3.69	4.12	4.39	4.79	4.95
150–499	1.88	1.90	1.93	2.26	2.25	1.93	2.20
500–749	2.07	1.97	1.77	2.78	2.20	2.10	2.06
≥750	1.95	1.88	1.37	1.75	1.97	1.65	1.71
Minority enrollment							
<20%	2.02	1.79	1.47	1.67	1.74	1.78	1.87
≥20%	1.39	1.45	.89	1.86	1.97	1.63	1.36
% of students receiving free or reduced-price lunch							
<20%	2.00	1.69	1.73	1.54	1.66	1.73	1.88
≥20%	1.37	1.46	1.16	1.76	1.73	1.68	1.45

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–1994 (Public School Questionnaire).

Table A.4— Standard errors for percentage of public schools with LEP students providing ESL or bilingual education programs, by selected school characteristics: 1993–1994

School characteristics	ESL programs	Bilingual programs
Total	.80	.98
Region		
Northeast	1.54	1.84
Midwest	2.09	2.01
South	1.23	1.75
West	1.27	2.13
Community type		
Urban	1.19	2.03
Suburban	1.43	1.74
Rural	1.20	1.75
School type		
Elementary	.98	1.24
Secondary	1.13	1.08
Combined	3.64	6.11
Student enrollment		
<150	6.29	5.41
150–499	1.30	1.99
500–749	1.53	1.88
≥750	1.45	1.89
Minority enrollment		
<20%	1.10	1.25
≥20%	1.03	1.49
% of students receiving free or reduced-price lunch		
<20%	1.15	1.01
≥20%	.99	1.40

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–1994 (Public School Questionnaire).

Table A.5— Standard errors for percentage of LEP students receiving different kinds of instruction, by selected school characteristics: 1993–1994

School characteristics	Teaching English to non-English-speaking students	Improving fluency in home language	Teaching subject in home language	Teaching to below age appropriate levels
Total	1.98	2.54	2.40	2.56
Region				
Northeast	3.31	4.72	4.10	4.55
Midwest	3.42	3.81	3.58	4.68
South	4.05	3.99	4.66	4.90
West	2.60	4.09	3.86	3.97
Community type				
Urban	2.70	2.90	3.12	3.24
Suburban	3.21	4.40	4.49	5.56
Rural	4.64	4.71	4.57	3.71
School type				
Elementary	2.65	3.19	2.90	3.40
Secondary	2.43	1.92	2.01	2.48
Combined	3.98	4.75	2.81	4.02
Student enrollment				
<150	5.92	5.73	5.64	4.97
150–499	3.38	3.68	4.36	4.71
500–749	4.96	4.94	5.37	5.32
≥750	2.42	3.88	4.02	3.23
Minority enrollment				
<20%	3.65	3.68	3.87	3.62
≥20%	2.24	2.76	2.56	2.79
% of students receiving free or reduced-price lunch				
<20%	2.34	1.93	1.95	2.77
≥20%	2.33	2.91	2.75	2.96

NOTE: See text on page 14 for the exact wording of each instruction for columns 1–4.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–1994 (Public School Questionnaire).

Table A.6— Standard errors for number and percentage of teachers teaching LEP students, by selected school characteristics: 1993–94

School characteristics	Number of teachers teaching LEP students	Percent of all teachers teaching LEP students	Among teachers with LEP students enrolled: *Percent of teachers with <10% LEP students*	*Percent of teachers with 10–50% LEP students*	*Percent of teachers with ≥ 50% LEP students*
Total	17433.37	.47	.79	.60	.45
Region					
Northeast	7657.35	1.02	1.59	1.29	.70
Midwest	5643.62	.73	.58	.53	.25
South	8315.50	.65	1.07	.89	.51
West	8124.64	.98	1.47	1.21	1.32
Community type					
Urban	9618.52	1.07	1.45	1.16	.96
Suburban	11720.04	1.02	1.07	.88	.66
Rural	7628.54	.63	1.06	.87	.43
School type					
Elementary	13918.89	.69	1.22	.98	.69
Secondary	7392.15	.46	.73	.58	.22
Combined	1979.83	1.96	3.24	3.78	1.02
Student enrollment					
<150	1118.61	1.11	1.56	1.37	.82
150–499	9399.20	.90	1.30	1.02	.72
500–749	10056.07	1.11	1.57	1.03	1.00
≥750	18842.25	.91	1.19	.98	.63
Minority enrollment					
<20%	9405.61	.54	.54	.47	.18
≥20%	16129.62	.76	1.12	.89	.69
% of students receiving free or reduced-price lunch					
<20%	10587.33	.71	.67	.65	.24
≥20%	15261.08	.75	1.17	.96	.73

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–1994 (Public Teacher Questionnaire).

Table A.7— Standard errors for percentage of teachers with LEP students who have received training for teaching LEP students, by selected school characteristics: 1993–94

School characteristics	Have earned an academic degree in ESL or bilingual education	Have received training for teaching LEP students
Total	.17	.65
Region		
Northeast	.33	1.19
Midwest	.13	.66
South	.36	.86
West	.32	1.47
Community type		
Urban	.40	1.35
Suburban	.25	1.40
Rural	.18	1.04
School type		
Elementary	.28	.99
Secondary	.13	.78
Combined	.38	3.85
Student enrollment		
<150	.96	2.34
150–499	.36	1.40
500–749	.43	1.76
≥750	.25	1.20
Minority enrollment		
<20%	.10	.83
≥20%	.29	.98
% of students receiving free or reduced-price lunch		
<20%	.18	.85
≥20%	.27	1.04
% LEP student in class		
<10%	.13	.48
10–50%	.33	1.71
≥50%	1.40	1.25

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–1994 (Public Teacher Questionnaire).

Appendix B
Denominators for Tables 1 & 2

Table B.1— Total number of public schools, total number of students, and total number of American Indian/Alaska Native, Asian/Pacific Islander, and Hispanic students, by state: 1993–94

	Total number of schools	Total number of public school students	Total number of American Indian, Asian, and Hispanic students
Total	80,740	41,621,660	6,818,742
Alabama	1,274	745,963	12,868
Alaska	478	127,130	37,905
Arizona	1,057	685,518	246,143
Arkansas	1,084	460,286	8,321
California	7,319	4,804,574	2,247,084
Colorado	1,329	616,434	129,507
Connecticut	964	472,718	50,836
Delaware	169	107,701	6,125
District of Columbia	160	75,948	5,176
Florida	2,348	1,888,762	279,439
Georgia	1,723	1,194,072	36,840
Hawaii	234	173,041	131,461
Idaho	573	218,179	19,700
Illinois	3,884	1,747,678	209,855
Indiana	1,869	972,991	23,751
Iowa	1,518	484,443	17,786
Kansas	1,450	431,981	34,399
Kentucky	1,327	693,316	6,280
Louisiana	1,446	791,318	23,844
Maine	721	207,975	3,283
Maryland	1,185	753,706	44,569
Massachusetts	1,689	776,415	93,999
Michigan	3,159	1,491,699	69,163
Minnesota	1,492	705,021	50,339
Mississippi	957	531,874	7,060
Missouri	2,082	938,836	27,124
Montana	890	175,611	23,105
Nebraska	1,296	248,016	11,296
Nevada	365	231,088	45,881
New Hampshire	445	174,562	3,948
New Jersey	2,195	1,097,841	193,234
New Mexico	663	323,001	186,258
New York	3,904	2,593,562	607,892
North Carolina	1,927	1,090,802	37,365
North Dakota	582	115,635	9,178
Ohio	3,636	1,816,266	42,549
Oklahoma	1,763	579,583	101,207
Oregon	1,184	478,877	52,963
Pennsylvania	3,128	1,805,243	70,765
Rhode Island	295	124,230	16,182
South Carolina	1,081	630,309	12,668
South Dakota	661	139,525	16,290
Tennessee	1,522	840,505	9,690
Texas	5,890	3,342,778	1,244,953
Utah	674	454,114	37,600
Vermont	318	91,787	1,709
Virginia	1,698	958,091	56,063
Washington	1,806	913,048	146,553
West Virginia	898	316,190	2,116
Wisconsin	2,014	880,935	56,983
Wyoming	411	102,484	9,439

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–94 (Public School Questionnaire).

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Table B.2— Total number of public schools, total number of students, and total number of American Indian/Alaska Native, Asian/Pacific Islander, and Hispanic students, by selected school characteristics: 1993–94

	Total number of schools	Total number of public school students	Total number of American Indian, Asian, and Hispanic students
Total	80,740	41,621,660	6,818,742
Region			
Northeast	13,659	7,344,332	1,041,848
Midwest	23,644	9,973,026	568,713
South	26,453	15,001,201	1,894,583
West	16,984	9,303,100	3,313,598
Community type			
Urban	19,184	12,163,036	3,185,708
Suburban	21,912	13,559,662	2,188,099
Rural	39,644	15,898,962	1,444,935
School type			
Elementary	58,013	26,885,507	4,561,177
Secondary	19,648	13,757,801	2,146,973
Combined	3,079	978,351	110,592
Student enrollment			
<150	9,449	792,542	80,537
150–499	37,071	12,449,493	1,438,632
500–749	19,744	11,965,029	1,806,201
≥750	14,477	16,414,595	3,493,372
Minority enrollment			
<20%	44,825	20,312,294	800,413
≥20%	35,915	21,309,366	6,018,329
% of students receiving free or reduced-price lunch			
<20%	26,207	15,680,804	1,493,153
≥20%	50,423	24,178,922	5,091,747

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–94 (Public School Questionnaire).

Appendix C
Technical Notes

I. Survey Content

The Schools and Staffing Survey (SASS) consists of four main component surveys administered to districts, schools, principals, and teachers. These surveys are the Teacher Demand and Shortage Survey, the School Principal Survey, the School Survey, and the Teacher Survey.

- The *Teacher Demand and Shortage* questionnaire has two sections, enrollment and teaching positions, and district policies. The first section, on enrollment and teaching positions, obtains information on the number of students, the number of teachers and librarians, position vacancies, new hires and certification status. The second section, on district policies, obtains information on teacher salary schedules and benefits, incentives, hiring and retirement policies, and high school graduation requirements. Race/ethnicity data on the student population and the teacher work force are also collected. The corresponding sections for private schools are incorporated into the Private School questionnaire. The data derived from this survey permit an assessment of teacher demand and shortage, the estimation of the number of teachers who hold certification in their field of assignment, and the affect of various policies on teacher supply and demand balances.

- The *School Principal* questionnaire obtains information about the age, sex, race-ethnicity, training, experience, salary, benefits, opinions and attitudes of school principals/headmasters. Questions required both objective responses (e.g., number of years of teaching experience) and judgmental responses (e.g., ranking the seriousness of school problems). The data derived from this survey provide insight into qualifications of school principals, which school problems principals view as serious, and how principals perceive their influence on school policies.

- *School* questionnaires were sent to public schools and private schools. The private school version of the questionnaire included items for identifying the religious or other affiliation of the school. This survey obtained information about schools such as student characteristics, staffing patterns, student/teacher ratios, types of programs and services offered, length of school day and school year, graduation and college application rates, and teacher turnover rates. These data provide information about the teaching experience of the staff, the sources of newly hired teachers, and the destinations of teachers who left the school the previous year.

- *Teacher* questionnaires were sent to teachers in public and private schools. The two versions of the questionnaire were virtually identical. The survey collected data from teachers regarding their education and training, teaching assignment, teaching experience, certification, teaching workload, perceptions and attitudes about teaching, job mobility, and workplace conditions. This information permits analyses of how these factors affect movement into and out of the teaching profession.

In addition to these four main components, the 1993–94 SASS featured: (1) similar principal, school, and teacher components specific to federally funded Bureau of Indian Affairs or tribally run Indian schools, (2) new components focusing on Library Media Specialists/

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Librarians and Library/Media Centers, and (3) a new student records component. Future reports will feature data from these new components.

Copies of the questionnaires used in the SASS can be obtained by writing to:

Schools and Staffing Survey Questionnaires
National Center for Education Statistics
555 New Jersey Ave., N.W., Rm. 422
Washington, DC 20208–5651

II. Target Population for SASS

The target populations for 1993–94 SASS were:

- Local Education Agencies (LEAs) that employ elementary and/or secondary level teachers (for example: public school districts, state agencies that operate schools for special student populations, such as inmates of juvenile correctional facilities, and cooperative agencies that provide special services to more than one school district).
- Public and private schools with students in any of grades K–12.
- Principals of those schools.
- Teachers in public and private schools who teach students in grades K–12.

III. Sample Design and Implementation[7]

A. Sampling Frames

The public school sampling frame was based on the 1991–92 school year CCD, which is a file of information collected annually by NCES from all state education agencies and is believed to be the most complete public school listing available. The frame includes regular public schools, Department of Defense operated military base schools, and special purpose schools such as special education, vocational, and alternative schools. After the deletion of duplicate schools, schools outside of the United States, and schools that only teach prekindergarten, kindergarten, or postsecondary students, there were a total of 82,746 schools on the public school frame.

B. Sample Selection Procedures

Schools are the primary sampling unit in SASS. Public schools were selected to be representative at the national and state levels. More detail is available in Abramson et al. (1996).

[7] For a detailed description of the sample design, see Abramson et al. 1996.

Each selected school was asked to provide a list of their teachers and selected characteristics. Four percent of the public schools did not provide teacher lists. A factor in the teacher weighting system was used to adjust for the nonparticipant schools.

C. Sample Sizes

Table C.1 shows the sample sizes and number of interview cases for each questionnaire by state. The number in sample is the number of in-scope, or eligible, cases. This number excludes the out-of-scope cases, which are drawn for the sample but are not eligible for interview. For example, a school which has closed or a teacher who has left the country would be considered out-of-scope.

The number of interviews is the number of in-scope (eligible) cases minus the noninterview cases. The noninterview cases include refusals or sample questionnaires with too little valid data to be considered complete interviews for the survey. The number of interviews is the actual unweighted number of cases upon which estimates in this report are based. A nonresponse adjustment is included in the weights to reduce the bias due to nonresponse.

Table C.1— Number of in-scope sample cases and number of interviews, public schools and teachers: 1993–94 SASS

	Public school		Public teacher	
	# in sample	# interviews	# in sample	# interviews
Total	9,532	8,767	53,008	47,109
Alabama	234	224	1,308	1,172
Alaska	197	170	1,022	864
Arizona	206	190	1,229	1,101
Arkansas	164	156	955	863
California	406	352	2,578	2,124
Colorado	176	164	977	868
Connecticut	161	148	832	726
Delaware	71	63	309	268
District of Columbia	65	55	278	197
Florida	243	228	1,291	1,161
Georgia	179	168	924	845
Hawaii	93	85	713	616
Idaho	169	158	969	900
Illinois	254	238	1,284	1,125
Indiana	178	166	1,028	936
Iowa	163	158	975	906
Kansas	162	149	1,026	933
Kentucky	161	149	803	721
Louisiana	224	207	1,079	969
Maine	156	145	897	811
Maryland	167	135	730	646
Massachusetts	222	208	1,508	1,325
Michigan	214	202	1,034	933
Minnesota	172	160	977	910
Mississippi	207	195	1,098	988
Missouri	177	168	990	896
Montana	190	178	1,354	1,249
Nebraska	163	139	830	770
Nevada	123	109	507	431
New Hampshire	121	117	582	521
New Jersey	192	167	1,012	858
New Mexico	173	160	863	771
New York	315	270	1,831	1,460
North Carolina	204	181	1,010	908
North Dakota	123	166	1,179	1,101
Ohio	189	176	999	895
Oklahoma	326	306	1,987	1,740
Oregon	173	159	1,016	909
Pennsylvania	189	169	939	830
Rhode Island	99	88	421	356
South Carolina	162	141	781	701
South Dakota	172	165	1,079	970
Tennessee	187	179	989	888
Texas	406	380	2,498	2,245
Utah	176	174	1,004	928
Vermont	105	97	489	423
Virginia	180	158	845	758
Washington	212	200	1,213	1,065
West Virginia	168	154	926	850
Wisconsin	176	164	1,014	930
Wyoming	136	131	826	748

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–94 (Public School Questionnaire).

IV. Data Collection Procedures

Data collection operations for the 1993–94 SASS took place during the 1993–94 school year. Table C.2 depicts both the specific data collection activity and the time frame in which it occurred.

Table C.2— Data collection time schedule

Activity	Date of Activity
Introductory letters mailed to school districts	September 1993
Introductory letters and teacher listing sheets mailed to schools	October 1993
Census field representatives called school districts to obtain the name of a contact person to whom the Teacher Demand and Shortage questionnaire should be addressed	October 1993
Lists of teachers provided by schools	October – December 1993
First mailing of questionnaires to school districts and school principals	December 1993
First mailing of questionnaires to schools and to teachers	January – February 1994
Second mailing of questionnaires to districts and school principals	January 1994
Second mailing of questionnaires to schools and teachers	February – March 1994
Telephone follow-up of mail nonrespondents	March – June 1994

V. Response Rates

A. Survey Response Rates

Table C.3 provides public response rates by state for schools and teachers. It is useful as an indication of possible nonresponse bias.

The weighted response rates were derived by dividing the sum of the basic weights for the interview cases by the sum of the basic weights for the eligible cases. The basic weight for each sample case was assigned at the time of sampling and is the inverse of the probability of selection.

Teacher response rates refer to the percentage of teachers responding in schools that provided teacher lists for sampling. Four percent of public schools did not send in teacher lists. The effective response rate is calculated by multiplying together the teacher list rate and the response rate:

Public teachers: .96 x .882 = .8467 x 100 = 84.7% effective response rate

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Table C.3— Final weighted public school and teacher response rate, by state: 1993–94

	Schools	Teachers
Total	92.3%	88.2%
Alabama	95.0	89.6
Alaska	87.7	85.8
Arizona	91.9	89.9
Arkansas	94.2	91.1
California	88.2	81.9
Colorado	92.2	88.0
Connecticut	93.1	88.2
Delaware	88.2	85.9
District of Columbia	85.5	70.9
Florida	94.5	91.1
Georgia	93.9	91.7
Hawaii	92.1	85.7
Idaho	91.7	92.7
Illinois	94.3	86.5
Indiana	93.7	91.3
Iowa	96.1	92.0
Kansas	92.8	90.7
Kentucky	92.1	90.4
Louisiana	90.1	90.6
Maine	91.9	90.2
Maryland	84.8	87.8
Massachusetts	94.2	87.3
Michigan	96.5	89.2
Minnesota	94.8	93.0
Mississippi	93.8	90.5
Missouri	95.3	91.7
Montana	92.4	91.6
Nebraska	89.0	92.2
Nevada	88.3	84.0
New Hampshire	97.6	89.8
New Jersey	87.1	85.7
New Mexico	93.3	90.2
New York	89.3	79.9
North Carolina	89.8	90.3
North Dakota	95.7	93.3
Ohio	92.8	88.7
Oklahoma	94.5	87.2
Oregon	93.0	90.0
Pennsylvania	88.5	88.2
Rhode Island	89.8	84.5
South Carolina	87.3	90.6
South Dakota	95.9	89.4
Tennessee	94.5	89.1
Texas	94.2	89.6
Utah	98.4	91.5
Vermont	93.3	86.2
Virginia	89.3	89.9
Washington	95.8	88.1
West Virginia	92.8	92.0
Wisconsin	93.9	92.5
Wyoming	94.7	91.0

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1993–94 (Public School Questionnaire).

B. Item Response Rates

The unweighted item response rates (i.e., the number of sample units responding to an item divided by the number of sample units that participated in the survey) for the SASS ranged from 75 percent to 100 percent. Table C.4 provides a brief summary of the item response rates. The item response rates in this table are unweighted and do not reflect additional response loss due to respondents' refusal to participate in the survey.

Table C.4— Summary of unweighted item response rates by questionnaire

Survey	Range of item response rates	Percent of items with a response rate of 90% or more	Percent of items with a response rate of less than 75%
School	83–100%	83%	0%
Teacher	75–100%	91%	0%

Table C.5 provides summaries of the unweighted item response rates for the items used in this report. All item response rates for the items used in this report are above 75 percent.

Table C.5— Unweighted item response rates, School File

Item description	Item name	Response rate (%)
English as a second language		
Program	S1410	98.9
Students	S1415	94.0
Bilingual education		
Program	S1420	98.6
Students	S1425	93.0
Free or reduced-price lunch		
Services	S1645	98.1
Students (K and above)	S1660	84.1
Teacher training		
Bachelor's degree	T0170	99.7
Master's degree	T0235	98.9
Education specialist degree	T0285	96.4
Ph.D./first professional degree	T0300	96.4

VI. Imputation Procedures

For questionnaire items that should have been answered but were not, values were imputed by (1) using data from other items on the questionnaire, (2) extracting data from a related component of the Schools and Staffing Survey (for example, using data from a school record to impute missing values on that school's LEA questionnaire), (3) extracting data from the sample file (information about the sample case from other sources; for example, the Private

School Survey or the Common Core of Data, collected in the 1991–92 school year), and (4) extracting data from a respondent with similar characteristics.

For some incomplete items, the entry from another part of the questionnaire or information from the sample file was directly imputed to complete the item; for others the entry was used as part of an adjustment factor with other data on the incomplete record. For example, if a respondent did not report whether a school offered remedial reading in item 22a of the public school questionnaire, the response (1 = Yes or 2 = No) for a similar school was imputed to item 22a of the incomplete record. However, if a respondent had answered "Yes" to item 22a but had not reported the number of students in the program, the ratio of number of students in remedial reading to the total enrollment for a similar school was used with the enrollment at the school for which item 22a was incomplete to impute an entry to item 22a (i.e., SCHOOL A item 22a = SCHOOL A ENROLLMENT multiplied by the ratio of SCHOOL B item 22a to SCHOOL B ENROLLMENT).

Values were imputed to items with missing data for records that had been classified as interviews (ISR=1). Noninterview adjustment factors were used during the data weighting process to compensate for data that were missing because the sample case was a noninterview (ISR=2). For more information about imputation procedures, see Abramson et al. 1996.

VII. Weighting[8]

Weighting of the sample units from the public sector was carried out to produce national and state estimates for public schools, teachers, principals, and LEAs. The private sector was weighted to produce national and association group estimates.

VIII. Standard Errors

Estimates found in the tables of this report are based on samples and are subject to sampling variability. Standard errors were estimated using a balanced repeated replications procedure that incorporates the design features of the stratified, clustered sample. The standard errors provide indications of the accuracy of each estimate. If all possible samples of the same size were surveyed under the same conditions, an interval of 1.96 standard errors below to 1.96 standard errors above a particular statistic would include the universe value in approximately 95 percent of the cases. Note, however, that the standard errors do not take into account the effects of biases due to item nonresponse, measurement error, data processing error, or other systematic error. Estimates with large standard errors (coefficient of variation greater than 30 percent) should be interpreted with caution.

[8] For a detailed description of the weighting processes, see Abramson et al. 1996.

X. Definitions

The following survey terms are defined as they apply to SASS:

Public school. A public school as an institution that provides educational services for at least one of grades 1–12 (or comparable ungraded levels), has one or more teachers to give instructions, is located in one or more buildings, receives public funds as primary support, and is operated by an education agency. Schools in juvenile detention centers and schools located on military bases and operated by the Department of Defense are included.

Teacher. A teacher is defined as a full-time or part-time teacher who teaches any regularly scheduled classes in any of grades K–12. This includes administrators, librarians, and other professional or support staff who teach regularly scheduled classes on a part-time basis.[9] Itinerant teachers are included, as well as long-term substitutes who are filling the role of a regular teacher on a long-term basis. An itinerant teacher is defined as a teacher who teaches at more than one school (for example, a music teacher who teaches three days per week at one school and two days per week at another). Short-term substitute teachers and student teachers are not included.

[9] This represents a change in the definition of teacher from previous administrations of SASS. In 1987–88 and 1990–91, a teacher was defined as any full-time or part-time teacher whose *primary assignment* was teaching in any of grades K–12. The prior definition excluded administrators and other staff who taught regularly scheduled classes but whose primary assignment was not teaching.

Additional Resources on the Schools and Staffing Survey (SASS)

SASS Data Products

The following SASS data products may be obtained free of charge while supplies last from:

U.S. Department of Education
National Center for Education Statistics
SASS Data Products
555 New Jersey Avenue, NW, Room 422
Washington, D.C. 20208-5651

Reports

- Out-of-Field Teaching and Educational Equality (NCES 96–040)
- Schools and Staffing in the United States: A Statistical Profile: 1993–94 (NCES 96–124)
- Private School Universe Survey, 1993–94 (NCES 96–143)
- SASS by State, 1993–94 Schools and Staffing Survey: Selected State Results (NCES 96–312)
- How Different? How Similar?: Comparing Key Organizational Qualities of American Public and Private Secondary Schools (NCES 96–322)
- Schools and Staffing in the United States: Selected Data for Public and Private Schools, 1993-94 (E.D. Tab, NCES 95-191)
- Private Schools in the United States: A Statistical Profile, 1990–91 (NCES 95–330)
- Teacher Supply in the U.S.: Sources of Newly Hired Teachers in Public and Private Schools, 1988–1991 (NCES 95–348)
- Characteristics of American Indian and Alaska Native Education, Results from the 1990–91 SASS (NCES 95–735)

- Teacher Supply, Teacher Qualifications and Teacher Turnover, Aspects of Teacher Supply and Demand in the U.S., 1990–91 (NCES 95–744)
- The Patterns of Teacher Compensation (NCES 95–829)
- Characteristics of Stayers, Movers, and Leavers: Results from the Teacher Followup Survey, 1991-92 (E.D. Tab, NCES 94-337)
- SASS by State (NCES 94-343)
- Private School Universe Survey, 1991-92 (NCES 94-350)
- Qualifications of the Public School Teacher Workforce: 1988 and 1991 (NCES 94–665)
- America's Teachers: Profile of a Profession (NCES 93-025)
- Private School Universe Survey, 1989-90 (NCES 93-122)
- Selected Tables on Teacher Supply and Demand (E.D. Tab, NCES 93-141)
- Schools and Staffing in the United States: A Statistical Profile, 1990-91 (NCES 93-146)
- Schools and Staffing in the United States: Selected Data for Public and Private Schools, 1990-91 (E.D. Tab, NCES 93-453)
- Schools and Staffing in the United States: A Statistical Profile, 1987-88 (NCES 92-120)
- Characteristics of Stayers, Movers, and Leavers: Results from the Teacher Followup Survey, 1988-89 (E.D. Tab, NCES 91-128)

Forthcoming Reports

- Characteristics of American Indian and Alaska Native Education, Results from the 1993–94 SASS
- America's Teachers: Profile of a Profession, 1993–94
- The Status of Teaching as a Profession, 1990–91
- The Effects of Professionalization on Teachers: A Multi-Level Analysis, 1990–91
- Time Spent Teaching Core Academic Subjects in Elementary Schools: Comparisons Across Community School, Teacher, and Student Characteristics

- Job Satisfaction Among America's Teachers: Effects of Workplace, Conditions, Background Characteristics, and Teacher Compensation, 1993–94
- A Profile of Administration Policies and Practices for Limited English Proficiency Students: Screening Methods, Teacher Training, and Program Support, 1993–94
- Private Schools in the United States: A Statistical Profile, 1993–94
- Sources of Newly Hired Teachers in Public and Private Schools, 1988–94
- Characteristics of Students' Programs: Results from Their Student Records, 1993–94
- Characteristics of Stayers, Movers, and Leavers: Results from the Teacher Followup Survey, 1994-95
- Characteristics of Public School Districts, 1993–94
- School Principals in the United States, 1993–94

Issue Briefs

- Are High School Teachers Teaching Core Subjects Without College Majors or Minors in Those Subjects? (Issue Brief, NCES 96–839)
- Where Do Minority Principals Work? (Issue Brief, NCES 96–840)
- What Academic Programs are Offered Most Frequently in Schools Serving American Indian and Alaska Native Students? (Issue Brief, NCES 96–841)
- How Safe are the Public Schools: What Do Teachers Say? (Issue Brief, NCES 96–842)
- Extended Day Programs in Elementary and Combined Schools (Issue Brief, NCES 96–843)
- What Criteria are Used in Considering Teacher Applicants? (Issue Brief, NCES 96–844)
- Private School Graduation Requirements (Issue Brief, NCES 95–145)
- How Much Time Do Public and Private School Teachers Spend in Their Work? (Issue Brief, NCES 95–709)
- Migration and Attrition of Public and Private School Teachers: 1991–92 (Issue Brief, NCES 95–770)
- Which Types of Schools Have the Highest Teacher Turnover? (Issue Brief, NCES 95–778)

- Libraries/Media Centers in Schools: Are There Sufficient Resources? (Issue Brief, NCES 95–779)
- Who Influences Decisionmaking About School Curriculum: What Do Principals Say? (Issue Brief, NCES 95–780)
- Public and Private School Principals: Are There Too Few Women? (Issue Brief, NCES 94-192)
- Sources of Newly Hired Teachers in Public and Private Schools, 1988-91 (Issue Brief, NCES 94-481)
- What are the Most Serious Problems in Schools? (Issue Brief, NCES 93-149)
- Teacher Salaries—Are They Competitive? (Issue Brief, NCES 93-450)
- Teaching and Administrative Work Experience of Public School Principals (Issue Brief, NCES 93-452)
- Teacher Attrition and Migration (Issue Brief, NCES 92-148)

Video

- America's Teachers: Profile of a Profession

Methods

- 1993-94 Schools and Staffing Survey: Sample Design and Estimation (Technical Report, NCES 96-089)
- An Exploratory Analysis of Nonrespondents in the 1990–91 Schools and Staffing Survey (NCES 96–338)
- Design Effects and Generalized Variance Functions for the 1990–91 Schools and Staffing Surveys (SASS) Volume I—User's Manual (NCES 95–342I)
- Design Effects and Generalized Variance Functions for the 1990–91 Schools and Staffing Surveys (SASS) Volume II—Technical Report (NCES 95–340II)
- Quality Profile for SASS: Aspects of the Quality of Data in the Schools and Staffing Surveys (Technical Report, NCES 94-340)
- 1990-91 Schools and Staffing Survey: Sample Design and Estimation (Technical Report, NCES 93-449)
- Modeling Teacher Supply and Demand, with Commentary (Research and Development Report, NCES 93-461)

- 1987-88 Schools and Staffing Survey: Sample Design and Estimation (Technical Report, NCES 91-127)

CD-ROMs

- Schools and Staffing Survey: 1993–94 Electronic Codebook and Public Use Data
- Schools and Staffing Survey: 1990–91 Electronic Codebook and Public Use Data
- Schools and Staffing Survey, 1987–88 Microdata and Documentation

Questionnaires

- SASS and PSS Questionnaires 1993–1994 (NCES 94–674)
- SASS and TFS Questionnaires 1990–1991
- SASS and TFS Questionnaires 1987–1988

User's Manuals

- 1990–91 Schools and Staffing Survey: Data File User's Manual Volume I: Survey Documentation (NCES 93-144-I)
- 1990–91 Schools and Staffing Survey: Data File User's Manual Volume II: Restricted-Use codebook (NCES 93-144-II)
- 1990–91 Schools and Staffing Survey: Data File User's Manual Volume III: Public-Use codebook (NCES 93-144-III)
- 1990–91 Schools and Staffing Survey: Data File User's Manual Volume IV: Bureau of Indian Affairs (BIA) Restricted-Use Codebooks: Administrator, Schools, and Teachers (NCES 93-144-IV)
- 1991–92 Teacher Followup Survey Data File User's Manual—Public-Use Version (NCES 94-331)
- 1991–92 Teacher Followup Survey Data File User's Manual—Restricted-Use Version (NCES 94-478)
- 1988–89 Teacher Followup Survey Data File User's Manual—Public-Use Version (NCES 92-058)

Forthcoming User's Manuals

- 1993–94 Schools and Staffing Survey, Data File User's Manual Volume I: Survey Documentation

- 1993–94 Schools and Staffing Survey, Data File User's Manual Volume II: Restricted-Use Codebook
- 1993–94 Schools and Staffing Survey, Data File User's Manual Volume III: Public-Use Codebook
- 1993–94 Schools and Staffing Survey, Data File User's Manual Volume IV: Bureau of Indian Affairs (BIA) Restricted-Use Codebooks: Administrator, Schools, and Teachers
- 1993–94 Schools and Staffing Survey, Data File User's Manual Volume V: Restricted-Use Codebook Students' Records

Conference Papers

- Using Classroom Instructional Process Items in National Center for Education Statistics Study To Measure Student Opportunity to Learn: A Progress Report
- Heaven or Hell? The Teaching Environment of Beginning Teachers
- Using Opportunity to Learn Items in Elementary and Secondary National Surveys
- Characteristics of Public and Private School Teachers
- Characteristics of Mathematics and Science Teachers
- Teacher Training, Certification and Assignment
- Teacher Turnover: Patterns of Entry To and Exit from Teaching
- Moonlighting Among Public and Private School Teachers
- Characteristics of Bilingual Education and English as a Second Language Teachers
- Highlights of Minority Data from the Schools and Staffing Survey
- Teacher Incentive Research with SASS
- Teacher Salaries: Comparing States After Adjusting for Teacher Experience and Education
- What are the Characteristics of Principals Identified as Effective by Teachers?
- Schools at Risk: Results of the 1987–88 Schools and Staffing Survey
- Destinations of Movers and Leavers: Where Do They Go?
- Classroom Environment and Support of Beginning Teachers: A Test of the "Crucible versus Cradle" Theory of Teacher Induction

- Why do Teachers Leave Teaching? Reasons for Teacher Attrition from the Teacher Followup Survey

NCES Working Papers Related to SASS

WP 94–01 Schools and Staffing Survey (SASS). Papers Presented at the Meetings of the American Statistical Association

Section on Survey Research Methods, August 1992

a. "The Schools and Staffing Survey: Research Issues"
b. "The Schools and Staffing Survey: How Reinterview Measures Data Quality"
c. "Mail Versus Telephone Response in the 1991 Schools and Staffing Surveys"
d. "Questionnaire Research in the Schools and Staffing Survey: A Cognitive Approach"
e. "Balance Half-Sample Replication with Aggregation Units"
f. "Characteristics of Nonrespondents in the Schools and Staffing Surveys' School Sample"
g. "Improving Reliability and Comparability on NCES Data on Teachers and Other Education Staff"

Establishment Surveys Conference, June 1993

a. "Sampling Frames at the United States National Center for Education Statistics"
b. "Monitoring Data Quality in Education Surveys"

Section on Survey Research Methods, August 1993

a. "Generalization Variance Functions for the Schools and Staffing Surveys"
b. "A Bootstrap Variance Estimator for the Schools and Staffing Survey"
c. "Adjusting for Nonresponse Bias of Correlated Items Using Logistic Regression"
d. "Comparisons of School Locale Setting: Self-Reported Versus Assigned"
e. "Characteristics of Nonrespondents to the 1990–91 Schools and Staffing Survey"

Social Statistics Section, August 1993

a. "Implicit Markets for Teacher Quality and School Attributes"
b. "Who Decides? Principals' and Teachers' Views on Decision-Making"
c. "Determinants of Pupil-Teacher Ratios at School Sites: Evidence from the Schools and Staffing Survey"

WP 94–02 Generalized Variance Estimates for Schools and Staffing Survey (SASS)

WP 94–03 1991 Schools and Staffing Survey (SASS) Reinterview Response Variance Report

WP 94–04 The Accuracy of Teachers' Self-report on Their Postsecondary Education: Teacher Transcript Study, Schools and Staffing Survey

WP 94–06 Six Papers on Teachers from the 1990–91 Schools and Staffing Survey and Other Related Surveys

a. "The Results of the 1993 Teacher List Validation Study (TLVS)"
b. "Designing the Teacher Follow-up Survey (TFS): Issues and Content)"
c. "Understanding the Supply of Elementary and Secondary Teachers: The Role of the School and Staffing Survey and the Teacher Followup Survey"
d. "Teacher Retention/Attrition: Issues for Research"
e. "Reflections on a SASS Longitudinal Study"
f. "Whither Didst Thou Go? Retention, Reassignment, Migration, and Attrition of Special and General Education Teachers in National Perspective"

WP 95–01 Schools and Staffing Survey: 1994. Papers Presented at the 1994 Meeting of the American Statistical Association (95–01)

Estimation Issues in School Surveys

a. "Intersurvey Consistency in School Surveys"
b. "Estimation Issues Related to the Student Component of the SASS"
c. "Properties of the Schools and Staffing Survey's Bootstrap Variance Estimator"
d. "Optimal Periodicity of a Survey: Sampling Error, Data Deterioration, and Cost"

Response and Coverage Issues in School Surveys

a. "Some Data Issues in School-Based Surveys"
b. "The 1991–92 Teacher Follow-up Survey Reinterview and Extensive Reconciliation"
c. "Improving Coverage in a National Survey of Teachers"
d. "Improving the Coverage of Private Elementary-Secondary Schools"

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WP 95–17 Estimates of Expenditures for Private K–12 Schools

WP 95–18 An Agenda for Research on Teachers and Schools: Revisiting NCES' Schools and Staffing Survey

WP 96–01 Methodological Issues in the Study of Teachers' Careers: Critical Features of a Truly Longitudinal Study

WP 96–02 Selected papers presented at the meeting of the 1995 American Statistical Association (96–02)

Overcoming the Bureaucratic Paradigm: Memorial Session in Honor of Roger Herriot

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f. "Teacher Supply and Demand in the U.S."

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WP 96–07 Should SASS Measure Instructional Processes and Teacher Effectiveness?

WP 96–09 Making Data Relevant for Policy Discussions: Redesigning the School Administrator Questionnaire for the 1998–99 SASS

WP 96–10 1998–99 Schools and Staffing Survey: Issues Related to Survey Depth

WP 96–11 Towards an Organizational Data Base on America's Schools: A Proposal for the Future of SASS, with Comments on School Reform, Governments, and Finance

WP 96–12 Predictors of Retention, Transfer, and Attrition of Special and General Education Teachers: Data from the 1989 Teacher Followup Survey

WP 96–15 Nested Structures: District Level Data in the SASS

WP 96–16 Strategies for Collecting Finance Data from Private Schools

*U.S. Government Printing Office: 1997 - 423-100/70005

ISBN 0-16-048976-8

United States
Department of Education
Washington, DC 20208–5651

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